NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 7-7-77	Spud: 6-7-77
Company: Doyle Hartman		Connection: None			
Pool: South Eunice		Formation: 7 rivers Queen			Unit: A
Completion Date: 7-6-77	Total Depth: 3900		Plug Back TD: 3875	Elevation:	Farm or Lease Name: Citgo SE St.
Csg. Size: 4 1/2 / Wt.: 10.5 / d: / Set At: 3900			Perforations: From 3645 To 3805		Well No.: 2
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: / Set At:			Perforations: From To		Unit: A / Sec.: 17 / Twp.: 22S / Rge.: 36E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: None		County: Lea
Producing Thru: Tbg.	Reservoir Temp. °F:	Mean Annual Temp. °F:	Baro. Press. – P_a:		State: New Mexico
L:	H:	Gg: .739	% CO_2:	% N_2:	% H_2S: / Prover: 2" / Meter Run: / Taps:

FLOW DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA Press. p.s.i.g.	TUBING DATA Temp. °F	CASING DATA Press. p.s.i.g.	CASING DATA Temp. °F	Duration of Flow
SI							171		154	Shut-in	1 hr.
1.	2	X	3/16	160		80	169	80	151		30 min.
2.	2	X	3/32	167		80	167	80	154		30 min.
3.	2	X	5/16	160		80	160	80	152		30 min.
4.	2	X	3/8	153		80	153	80	151		45 min.
5.	2	X	1/2	130		80	130	80	147		30 min.

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	.6082		182.2	.9813	1.163	1.020	129
2	.8303		180.2	.9813	1.163	1.020	176
3	1.672		173.2	.9813	1.163	1.020	337
4	2.378		166.2	.9813	1.163	1.020	460
5	4.279		143.2	.9813	1.163	1.020	710

NO.	P_t	Temp. °R	P_r	z
1	.27	540	1.35	.961
2	.27	540	1.35	.961
3	.26	540	1.35	.962
4	.25	540	1.35	.964
5	.21	540	1.35	.970

Gas Liquid Hydrocarbon Ratio: dry Mcf/Bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .739 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 668 P.S.I.A. P.S.I.A.
Critical Temperature: 401 R R

P_c 184.2 P_c^2 33.9

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		167.2	28.0	5.9
2		167.2	28.0	5.9
3		165.2	27.3	6.6
4		164.2	27.0	6.9
5		160.2	25.7	8.2

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.134$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4.134$

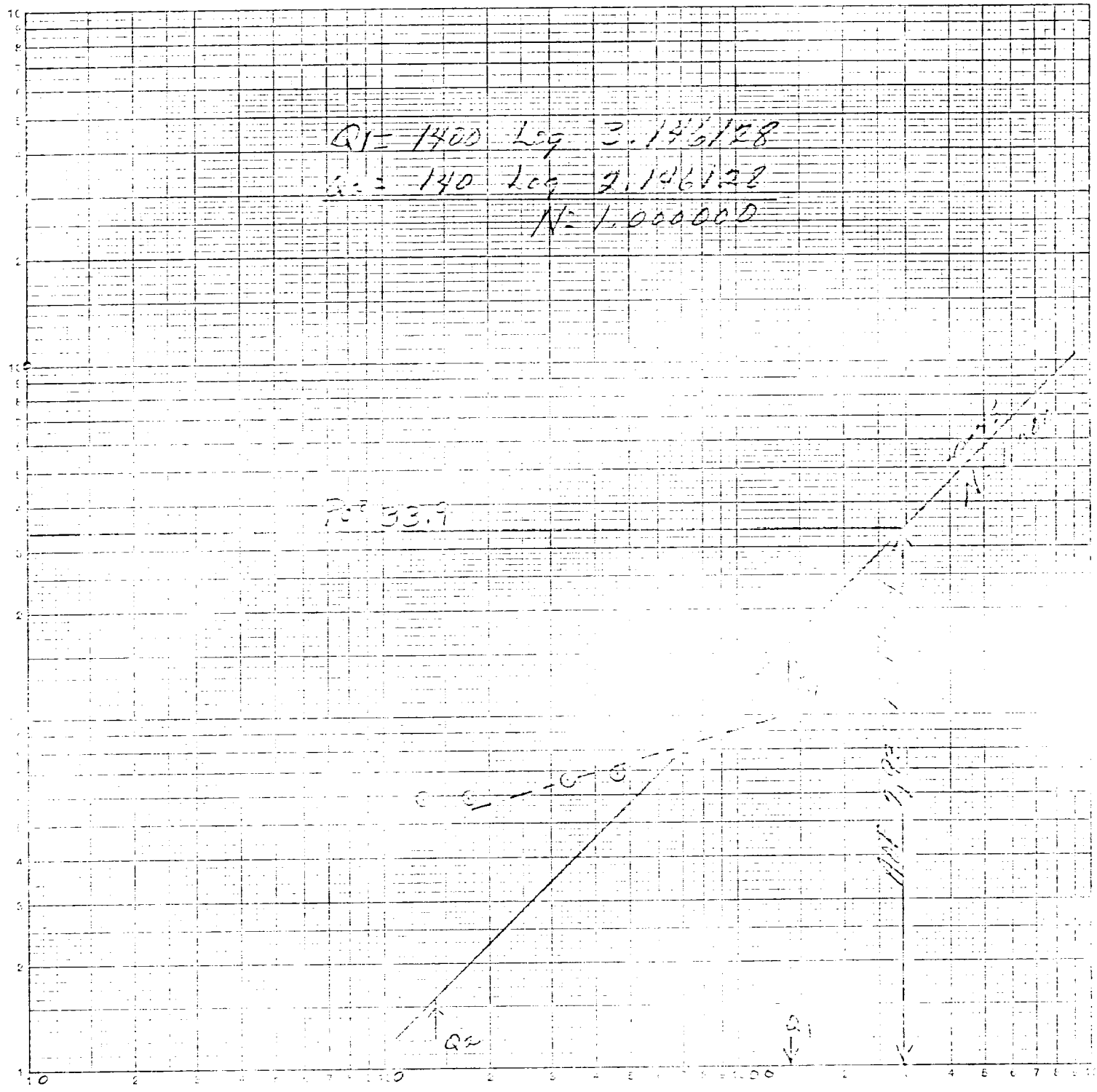
$AOF = Q\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.935$

Absolute Open Flow: 2.935 Mcfd @ 15.025 Angle of Slope θ: 45 Slope, n: 1.00

Remarks: Well made small amount of fluid on 4th & 5th rates. Point alignment too flat, a 45° slope was drawn through high rate of flow.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
Orig. Signed by Jerry Sexton Dist 1, Supv.	Reggie Reston	Reggie Reston	

DOYLE HARTMAN
Citgo Se St. #2
A-17-22-36 Lea Co., New Mexico
July 6, 1977



$P_f^2 - P_{wf}^2$ in (000's)

46 7400
LOGARITHMIC